What is claimed is:

1. A data recording medium having a plurality of concentric or spiral tracks for recording information represented as marks and spaces between the marks, the marks being formed by emitting to a track recording surface an optical beam modulated by a plurality of drive pulses where the drive pulse count is adjusted according to a length of a mark part in the original signal to be recorded to the track, said data recording medium comprising:

a data recording area for recording data, and

a specific information recording area for recording when the data recording medium is loaded into a particular recording device

device-specific information specific to the particular recording device, and

at least one of a specific first pulse position Tu and a specific last pulse position Td of a drive pulse sequence required by the particular recording device to record said marks to the data recording medium.

2. The data recording medium as set forth in claim 1, wherein the device-specific information includes at least one of the following: a name of the particular recording device manufacturer, a product number, a location where the particular recording device was produced, and a production date.

3. The data recording medium as set forth in claim 1, wherein the specific information recording area further records temporary power information indicative of a power level of an optical beam used for determining at least one of a specific first pulse position Tu and a specific last pulse position Td,

said temporary power information including at least one of the following: a peak power setting, bias power setting, margin constant, and asymmetry.

4. The data recording medium as set forth in claim 3, wherein the specific information recording area further records a pattern signal for determining said temporary power information.

5. The data recording medium as set forth in claim 1, wherein the specific information recording area further records operational power information indicative of a power level of an optical beam used for actual data recording in the data recording area,

said operational power information including at least one of the following: a peak power setting, bias power setting, and margin constant.

6. The data recording medium as set forth in claim 5, wherein the specific information recording area further records a pattern signal for determining said operational power information.

7. The data recording medium as set forth in claim 1, wherein said specific information recording area further records an asymmetry information used for determining at least one of a specific first pulse position Tu and a specific last pulse position Td.

8. The data recording medium as set forth in claim 1, further comprising:

a control information recording area for prerecording at least one of a typical first drive pulse position Tu and a typical last drive pulse position Td of a drive pulse sequence required for recording said marks to the data recording medium.

9. The data recording medium as set forth in claim 1, wherein said specific information recording area is provided for recording at least one of a specific first pulse position Tu and a specific last pulse position Td, and a device-specific information as a data set, said data set being recorded for a plurality of different recording devices.

10. A recording and reproducing device for recording information to and reproducing information from a data recording medium,

said data recording medium having a plurality of concentric or spiral tracks for recording information represented as marks and spaces between the marks, the marks being formed by emitting to a track recording surface an optical beam modulated by a plurality of drive pulses where the drive pulse count is adjusted according to a length of a mark part in the original signal to be recorded to the track,

a data recording area for recording data, and

a specific information recording area for recording when the data recording medium is loaded into a particular recording device

device-specific information specific to the particular recording device, and

at least one of a specific first pulse position Tu and a specific last pulse position Td of a drive pulse sequence required by the particular recording device to record said marks to the data recording medium,

the recording and reproducing device comprising:

a reading means for reading device-specific information specific to the data recording medium from a particular area of the data recording medium; and

memory for storing said read medium-specific information.

11. The recording and reproducing device as set forth in claim 10, wherein the medium-specific information includes at least one of the following: a name of the data recording medium manufacturer, a product number, a location where the data recording medium was produced, and a production date.

12. The recording and reproducing device as set forth in claim 10, wherein the memory further stores temporary power information indicative of a power level of an optical beam used for determining a specific first pulse position Tu and/or specific last pulse position Td,

said temporary power information including at least one of the following: a peak power setting, bias power setting, margin constant, and asymmetry.

13. The recording and reproducing device as set forth in claim 12, wherein the memory further stores a pattern signal for determining said temporary power information.

14. The recording and reproducing device as set forth in claim 10, wherein the memory further stores operational power information indicative of a power level of an optical beam used for actual data recording in the data recording area,

said operational power information including at least one of the following: a peak power setting, bias power setting, and margin constant.

15. The recording and reproducing device as set forth in claim 14, wherein the memory further stores a pattern signal for determining said operational power information.

16. The recording and reproducing device as set forth in claim 10, wherein said memory further records an asymmetry information used for determining at least one of a specific first pulse position Tu and a specific last pulse position Td.

17. The recording and reproducing device as set forth in claim 10, wherein the memory further stores said specific first pulse position Tu and/or said specific last pulse position Td.

18. The recording and reproducing device as set forth in claim 10, wherein the memory further stores medium-specific information for a plurality of different data recording media used in the recording and reproducing device.

19. A recording method for recording to a data recording medium, said data recording medium having a plurality of concentric or spiral tracks for recording information represented as marks and spaces between the marks, the marks being formed by emitting to a track recording surface an optical beam modulated by a plurality of drive pulses where the drive pulse count is adjusted according to a length of a mark part in the original signal to be recorded to the track,

a data recording area for recording data, and

a specific information recording area for recording when the data recording medium is loaded into a particular recording device

device-specific information specific to the particular recording device, and

at least one of a specific first pulse position Tu and a specific last pulse position Td of a drive pulse sequence required by the particular recording device to record said marks to the data recording medium,

the recording method comprising steps for:

determining said specific first pulse position Tu and/or said specific last pulse position Td; and

then recording data to the data recording area.

20. The recording method as set forth in claim 19, wherein the specific first pulse position Tu is obtained from a length of a mark part and immediately preceding space part in a pattern signal, and

the specific last pulse position Td is obtained from a length of a mark part and immediately following space part in a pattern signal.

21. The recording method as set forth in claim 19, wherein the specific first pulse position Tu is expressed as a time difference TF between a first reference point R1, which is a leading edge of a mark part in the pattern signal to be recorded, and a first edge of the first pulse in a plurality of drive pulses, and

specific last pulse position Td is expressed as a time difference TL between a second reference point R2, which has a specific known position relative to a trailing edge of a mark part in the pattern signal to be recorded, and a trailing edge of the last pulse in a plurality of drive pulses.

22. The recording method as set forth in claim 20, wherein the pattern signal contains an adjustment signal for obtaining a DSV of 0.

23. The recording method as set forth in claim 19, wherein the specific first pulse position Tu and/or specific last pulse position Td is determined by reproducing a specific information recording area of the data recording medium to obtain necessary information.

24. The recording method as set forth in claim 19, wherein the specific first pulse position Tu and/or specific last pulse position Td is determined by reading information from memory in a particular recording and reproducing device in which the data recording medium is used to obtain necessary information.

25. The recording method as set forth in claim 19, wherein the information determined for the specific first pulse position Tu and/or specific last pulse position Td is recorded to the specific information recording area of the data recording medium in conjunction with device-specific information specific to the particular recording and reproducing device.

26. The recording method as set forth in claim 19, wherein the information determined for the specific first pulse position Tu and/or specific last pulse position Td is recorded in memory in a particular recording and reproducing device in conjunction with device-specific information specific to the particular recording and reproducing device.

27. The recording method as set forth in claim 19, wherein temporary power information indicative of a power level of an optical beam used for determining a specific first pulse position Tu and/or specific last pulse position Td is further recorded to the specific information recording area of the data recording medium,

said temporary power information including at least one of the following: a peak power setting, bias power setting, margin constant, and asymmetry.

28. The recording method as set forth in claim 27, wherein a pattern signal for determining said temporary power information is further recorded to said specific information recording area.

29. The recording method as set forth in claim 19, wherein operational power information indicative of a power level of an optical beam used for actual data recording in the data recording area is further recorded to the specific information recording area of the data recording medium,

said operational power information including at least one of the following: a peak power setting, bias power setting, and margin constant.

30. The recording method as set forth in claim 29, wherein a pattern signal for determining said operational power information is further recorded to said specific information recording area.

31. The recording method as set forth in claim 19, wherein said specific information recording area further records an asymmetry information used for determining at least one of a specific first pulse position Tu and a specific last pulse position Td.

32. A recording method for recording to a data recording medium, said data recording medium having a plurality of concentric or spiral tracks for recording information represented as marks and spaces between the marks, the marks being formed by emitting to a track recording surface an optical beam modulated by a plurality of drive pulses where the drive pulse count is adjusted according to a length of a mark part in the original signal to be recorded to the track,

a data recording area for recording data, and

a specific information recording area for recording when the data recording medium is loaded into a particular recording device

device-specific information specific to the particular recording device, and

at least one of a specific first pulse position Tu and a specific last pulse position Td of a drive pulse sequence required by the particular recording device to record said marks to the data recording medium,

the recording method comprising steps for:

determining emission power of an optical beam for recording said marks; and

then determining a specific first pulse position Tu and/or specific last pulse position Td.

33. The recording method as set forth in claim 32, wherein the optical beam emission power is determined by recording a predetermined specified pattern signal to the data recording medium.

34. The recording method as set forth in claim 33, wherein the specified pattern signal contains a single signal.

35. The recording method as set forth in claim 33, wherein the specified pattern signal contains an adjustment signal for obtaining a DSV of 0.

36. The recording method as set forth in claim 33, wherein the specific pattern signal recorded to the data recording medium is reproduced, the reproduced specific pattern signal is compared with a specific pattern signal for recording, and the emission power is set so that a difference between the compared signals is a specific value or less.

37. The recording method as set forth in claim 33, wherein the predetermined specific pattern signal is prerecorded to the data recording medium.

38. The recording method as set forth in claim 33, wherein the predetermined specific pattern signal is prerecorded in the recording device.

39. The recording method as set forth in claim 33, wherein the emission power determined for a specific data recording medium is recorded to said specific data recording medium.

40. The recording method as set forth in claim 33, wherein the emission power determined for a specific data recording medium is stored in the recording device in conjunction with the medium-specific information for said specific data recording medium.

41. The recording method as set forth in claim 32, wherein temporary power information indicative of a power level of an optical beam used for determining a specific first pulse position Tu and/or specific last pulse position Td is further recorded to the specific information recording area of the data recording medium,

said temporary power information including at least one of the following: a peak power setting, bias power setting, margin constant, and asymmetry.

42. The recording method as set forth in claim 41, wherein a pattern signal for determining said temporary power information is further recorded to said specific information recording area.

43. The recording method as set forth in claim 32, wherein operational power information indicative of a power level of an optical beam used for actual data recording in the data recording area is further recorded to the specific information recording area of the data recording medium,

said operational power information including at least one of the following: a peak power setting, bias power setting, and margin constant.

44. The recording method as set forth in claim 43, wherein a pattern signal for determining said operational power information is further recorded to said specific information recording area.

45. A recording method for recording to a data recording medium, said data recording medium having a plurality of concentric or spiral tracks for recording information represented as marks and spaces between the marks, the marks being formed by emitting to a track recording surface an optical beam modulated by a plurality of drive pulses where the drive pulse count is adjusted according to a length of a mark part in the original signal to be recorded to the track,

a data recording area for recording data, and

a specific information recording area for recording when the data recording medium is loaded into a particular recording device

device-specific information specific to the particular recording device, and

at least one of a specific first pulse position Tu and a specific last pulse position Td of a drive pulse sequence required by the particular recording device to record said marks to the data recording medium,

the recording method comprising steps for:

determining a specific first pulse position Tu and/or specific last pulse position Td, and

then determining emission power of an optical beam for recording said marks.

46. The recording method as set forth in claim 45, wherein the optical beam emission power is determined by recording a predetermined specified pattern signal to the data recording medium.

47. The recording method as set forth in claim 46, wherein the predetermined specific pattern signal is prerecorded to the data recording medium.

48. The recording method as set forth in claim 46, wherein the predetermined specific pattern signal is prerecorded in the recording device.

49. The recording method as set forth in claim 46, wherein the emission power determined for a specific data recording medium is recorded to said specific data recording medium.

50. The recording method as set forth in claim 46, wherein the emission power determined for a specific data recording medium is stored in the recording device in conjunction with the medium-specific information for said specific data recording medium.

51. The recording method as set forth in claim 45, wherein temporary power information indicative of a power level of an optical beam used for determining a specific first pulse position Tu and/or specific last pulse position Td

is further recorded to the specific information recording area of the data recording medium,

said temporary power information including at least one of the following: a peak power setting, bias power setting, margin constant, and asymmetry.

52. The recording method as set forth in claim 51, wherein a pattern signal for determining said temporary power information is further recorded to said specific information recording area.

53. The recording method as set forth in claim 45, wherein operational power information indicative of a power level of an optical beam used for actual data recording in the data recording area is further recorded to the specific information recording area of the data recording medium,

said operational power information including at least one of the following: a peak power setting, bias power setting, and margin constant.

54. The recording method as set forth in claim 53, wherein a pattern signal for determining said operational power information is further recorded to said specific information recording area.

55. The recording method as set forth in claim 45, wherein said specific information recording area further records an asymmetry information used for determining at least one of a specific first pulse position Tu and a specific last pulse position Td.

56. A recording method for recording to a data recording medium, said data recording medium having a plurality of concentric or spiral tracks for recording

information represented as marks and spaces between the marks, the marks being formed by emitting to a track recording surface an optical beam modulated by a plurality of drive pulses where the drive pulse count is adjusted according to a length of a mark part in the original signal to be recorded to the track,

a data recording area for recording data, and

a specific information recording area for recording when the data recording medium is loaded into a particular recording device

device-specific information specific to the particular recording device, and in conjunction therewith

at least one of a specific first pulse position Tu and a specific last pulse position Td of a drive pulse sequence required by the particular recording device to record said marks to the data recording medium,

the recording method comprising steps for:

compensating for group delay so that a same group delay level is obtained in a read signal even when the frequency of the recorded signal differs; and

then determining a specific first pulse position Tu and/or specific last pulse position Td.

57. The recording method as set forth in claim 56, wherein group delay compensation is accomplished by recording a test signal having a space signal component of a specific length to the data recording medium.

58. The recording method as set forth in claim 57, wherein the test signal is an embossed signal prerecorded to the data recording medium.

59. The recording method as set forth in claim 57, wherein the test signal is prerecorded to a specific area of the data recording medium.

60. The recording method as set forth in claim 57, wherein the test signal is prerecorded to the recording device.

61. The recording method as set forth in claim 57, wherein group delay compensation is performed to minimize jitter in the reproduced test signal.

62. The recording method as set forth in claim 56, wherein temporary power information indicative of a power level of an optical beam used for determining a specific first pulse position Tu and/or specific last pulse position Td is further recorded to the specific information recording area of the data recording medium,

said temporary power information including at least one of the following: a peak power setting, bias power setting, margin constant, and asymmetry.

63. The recording method as set forth in claim 62, wherein a pattern signal for determining said temporary power information is further recorded to said specific information recording area.

64. The recording method as set forth in claim 56, wherein operational power information indicative of a power level of an optical beam used for actual data recording in the data recording area is further recorded to the specific information recording area of the data recording medium,

said operational power information including at least one of the following: a peak power setting, bias power setting, and margin constant.

65. The recording method as set forth in claim 64, wherein a pattern signal for determining said operational power information is further recorded to said specific information recording area.

66. The recording method as set forth in claim 56, wherein said specific information recording area further records an asymmetry information used for determining at least one of a specific first pulse position Tu and a specific last pulse position Td.

67. A data recording medium having a plurality of concentric or spiral tracks for recording information represented as marks and spaces between the marks, the marks being formed by emitting to a track recording surface an optical beam modulated by a plurality of drive pulses where the drive pulse count is adjusted according to a length of a mark part in the original signal to be recorded to the track, said data recording medium comprising:

a data recording area for recording data, and

a control data zone for prerecording control data as a sequence of embossed marks and spaces,

said control data including at least one of a first pulse position Tu and a last pulse position Td of a drive pulse sequence required by a recording device to record said marks to the data recording medium, and

temporary power information indicative of a power level of an optical beam used for determining a said first pulse position Tu and/or last pulse position Td,

said temporary power information including at least one of the following: a peak power setting, bias power setting, margin constant, and asymmetry.

68. A data recording medium having a plurality of concentric or spiral tracks for recording information represented as marks and spaces between the marks, the marks being formed by emitting to a track recording surface an optical beam modulated by a plurality of drive pulses where the drive pulse count is adjusted according to a length of a mark part in the original signal to be recorded to the track, said data recording medium comprising:

a data recording area for recording data, and

a control data zone for prerecording control data as a sequence of embossed marks and spaces,

said control data including at least one of a first pulse position Tu and a last pulse position Td of a drive pulse sequence required by a recording device to record said marks to the data recording medium, and

operational power information indicative of a power level of an optical beam used for actual data recording in the data recording area,

said operational power information including at least one of the following: a peak power setting, bias power setting, and margin constant.

69. A data recording medium having a plurality of concentric or spiral tracks for recording information represented as marks and spaces between the marks, the marks being formed by emitting to a track recording surface an optical beam modulated by a plurality of drive pulses where the drive pulse count is adjusted according to a length of a mark part in the original signal to be recorded to the track, said data recording medium comprising:

a data recording area for recording data, and

a control data zone for prerecording control data as a sequence of embossed marks and spaces,

said control data including at least one of a first pulse position Tu and a last pulse position Td of a drive pulse sequence required by a recording device to record said marks to the ~~data recording~~ medium, and

an asymmetry information used for determining said pulse positions.

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